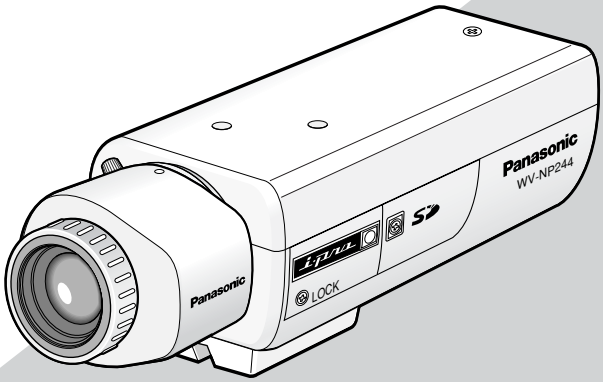
Panasonic

Network camera
Operating Instructions

Model No. WV-NP244



(Lens is option.)

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

CAUTION
RISK OF ELECTRIC
SHOCK DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Power disconnection. Unit with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.

For Canada

This Class A digital apparatus complies with Canadian ICES-003.

For U.S.A

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

The serial number of this product may be found on the surface of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No._____

Serial No._____

WARNING:

- This apparatus must be earthed.
- To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- The apparatus should not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, should be placed on the apparatus.
- All work related to the installation of this product should be made by qualified service personnel or system installers.

Important Safety Instructions

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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(6) ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, ANY LOSS OR DAMAGE, ARISING OUT OF THE IMPROPER DETECTION OR SLIP-UP IN DETECTION BY VMD (Video Motion Detector) FUNCTION OF THE PRODUCT.

Preface

The network camera WV-NP244 is designed to operate using a PC on a network (10BASE-T/100BASE-TX) to monitor images. By connecting to a network (LAN) or the Internet, images and audio from the camera can be monitored on a PC via a network. *1

Features

- Video signals captured by the progressive CCD (Charge-Coupled Device) will be converted into JPEG or MPEG-4 streams, and they can be monitored at up to 30 fps (VGA resolution).
- Audio captured by the built-in microphone can be monitored using a PC via a network.
- When connecting with a PoE (Power over Ethernet, IEEE802.3af compliant) device, power will be supplied by simply connecting a LAN cable. This achieves reduction of installation time including wiring work due to this wire-saving capability.
- 1/3 inch progressive CCD solid-state image sensor with VGA resolution (640 x 480 pixels) achieves high-fidelity motion image scanning with high-resolution.
- The motion detection function that detects a motion in a designated surveillance area and issue an alarm signal is featured. *2
- The FTP backup function and recording of each log on an optional SD memory card are available using the featured SD memory card slot. *3

*1 It is necessary to configure the network settings of the PC and its network environment to monitor images and audio from the camera on the PC. It is also necessary that a web browser is installed on the PC.

*2 The motion detection function is not the dedicated function to prevent thefts, fires, etc..We assume no responsibility whatsoever for any damages resulting from the use of the motion detection function.

*3 This camera is applicable with Panasonic's SD memory card (64 MB, 128 MB, 256 MB, 512 MB and 1 GB).

About these Operating Instructions

There are 2 sets of operating instructions for the WV-NP244 as follows.

- Operating Instructions (book, these operating instructions)
- Operating Instructions (PDF)

These "Operating Instructions" contain descriptions of how to install and connect this camera, and how to perform the required network settings.
Refer to the "Operating Instructions (PDF)" on the provided CD-ROM for descriptions of how to perform the camera settings and how to operate this camera. Adobe® Reader is required to read these operating instructions (PDF).

System Requirements for a PC

OS:	Microsoft® Windows® 2000 SP4, Microsoft® Windows® XP Home Edition SP2, Microsoft® Windows® XP Professional Edition SP2
Computer:	IBM PC/AT Compatible
CPU:	Pentium® 4 2.4GHz or faster
Memory:	512 MB or more
Monitor:	1024 x 768 pixels or more, 24-bit True color or better
Network Interface:	10/100Mbps Network interface card must be installed
Web Browser:	Microsoft® Internet Explorer 6.0 SP2
CD-ROM Drive:	It is necessary to read the operating instructions on the provided CD-ROM.
Adobe® Reader®:	It is necessary to read the operating instructions on the provided CD-ROM.

* Audio will not be heard if a sound card is not installed on a PC. Audio may be interrupted depending on the network environment.

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Precautions

Refer to all work related to the installation of this product to qualified service personnel or system installer.

Do not attempt to disassemble the product.
There are no serviceable parts inside. Contact the qualified service personnel for maintenance.

Use this appliance for indoor use only.
Do not expose the appliance to direct sunlight for hours and do not install the product near a heater or an air conditioner. Otherwise, it may cause deformation, discoloration and malfunction. Keep the appliance away from water and moisture.

To keep on using with stable performance
- Parts of this product may deteriorate and it may shorten lifetime of this product when using in locations subject to high temperatures and high humidity. Do not expose the product to direct heat such from a heater.
- Use the appliance at temperature within +5 °C - +35 °C (41 °F - 95 °F) and humidity below 90 %. (when using the appliance without turning the power off)

Handle the appliance with care.
Do not strike or shake, as this may damage the appliance. It may cause a malfunction.

About the PC monitor
When displaying the same image on the PC monitor at length, the PC monitor may be damaged. It is recommended to use a screen-saver.

When an error is detected, the camera will restart automatically.
This camera will restart when detecting an error caused by any reason. The camera will be inoperable for around 30 seconds after the restart just as when the power is turned on.

Cleaning the camera body
Turn the power off when cleaning of the camera. Use a dry cloth to clean the camera. When the dirt is hard to remove, use a mild detergent and wipe gently. Then, wipe with a dry cloth.

Do not use strong abrasive detergent when cleaning the camera body.
Otherwise, it may cause discoloration.
When using a chemical cloth for cleaning, read the caution provided with the chemical cloth product.

Cleaning the lens
Use a lens cleaning paper (used to clean camera lenses or lenses of spectacles). When using solvent, use an alcohols solvent. Do not use a thinner or a glass cleaner.

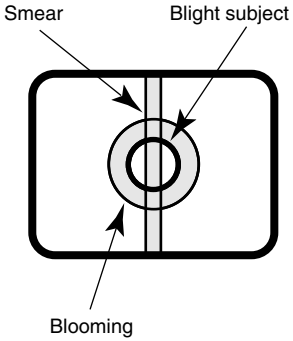
SD memory card
- When insert an SD memory card into the SD memory card slot, turn the power of the camera off. Otherwise, it may cause malfunction or damage data recorded on the SD memory card.
  Refer to page 17 for descriptions of how to insert/remove an SD memory card.
- When using an unformatted SD memory card, format it using this camera.
  Recorded data on the SD memory card will be deleted when formatted.
  If using an unformatted SD memory card or using an SD card formatted with other device, the camera may not work properly or performance deterioration may be caused.
  Refer to the Operating Instructions (PDF) for descriptions of how to format an SD memory card.
- It is recommended to use Panasonic's SD memory card.

Otherwise, the camera may not work properly or performance deterioration may be caused.

- Images saved on the SD memory card may lead to personal information leakage. When it is necessary to give the camera to someone, even when for repair, make sure the SD memory card is removed from the camera.
- There are limited times to overwrite on an SD memory card.
  It is recommended to replace the SD memory card when having a periodic maintenance of the camera.

Do not aim the camera at strong light sources.

A light source such as a spot light causes a blooming (light bleeding) or a smear (vertical lines).



PoE (Power over Ethernet)

Use a PoE hub/device that is compliant with IEEE802.3af standard.

Broadband router

When it is necessary to use a broadband router to connect the camera to the Internet, use a broadband router with the port forwarding function (NAT, IP masquerade).
Refer to the Operating Instructions (PDF) for further information about the port forwarding function.

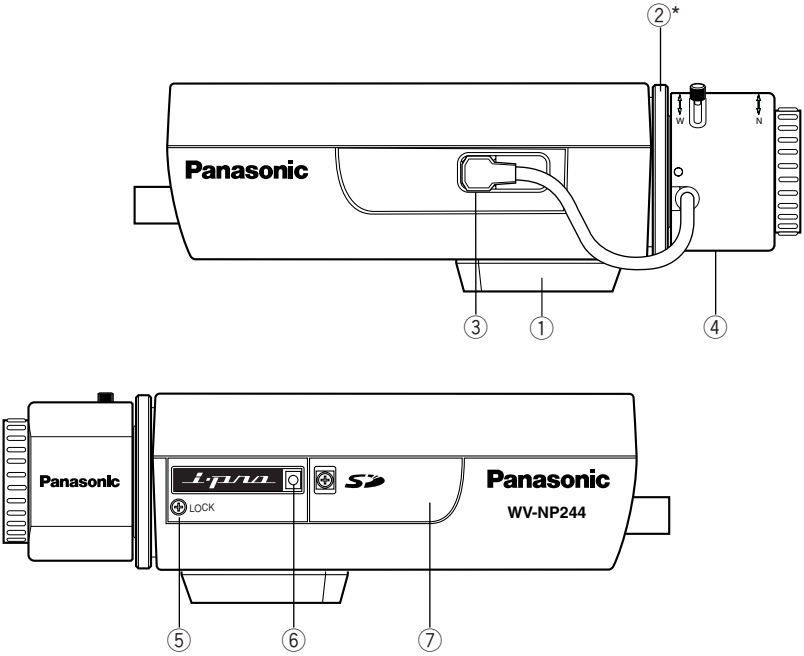
Radio disturbance

When the camera is used near TV/radio antenna, strong electric field or magnetic field (near a motor or a transformer), images may be distorted and noise sound may be produced.

Do not install the camera in a humid or dust-laden environment.

Otherwise, lifetime of the internal parts may be shortened.

Major Operating Controls and Their Functions



① **Tripod mount base**

② **Flange-back adjusting ring***

③ **ALC lens connector**

④ **Lens (option)**

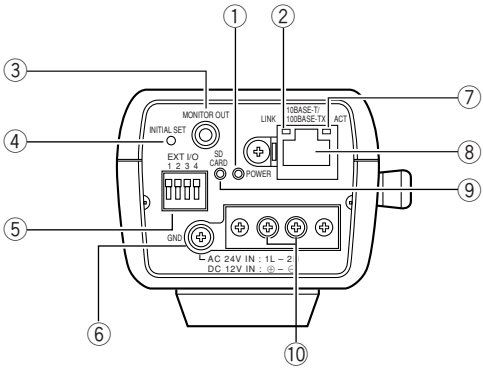
⑤ **Focus fixing screw (LOCK)**

⑥ **Microphone**

⑦ **SD card memory slot**

* It is necessary to adjust the flange-back length together with the lens adjustment. Refer to page 13 for descriptions of how to adjust the flange-back length.

<REAR>



① **Power indicator (green)**

② **Link indicator**

③ **Monitor out connector (for adjustment) (ø3.5 mm, mini jack)**

④ **INITIAL SET button**

⑤ **External I/O terminals**

⑥ **Ground terminal**

⑦ **Access indicator**

⑧ **Network connector**

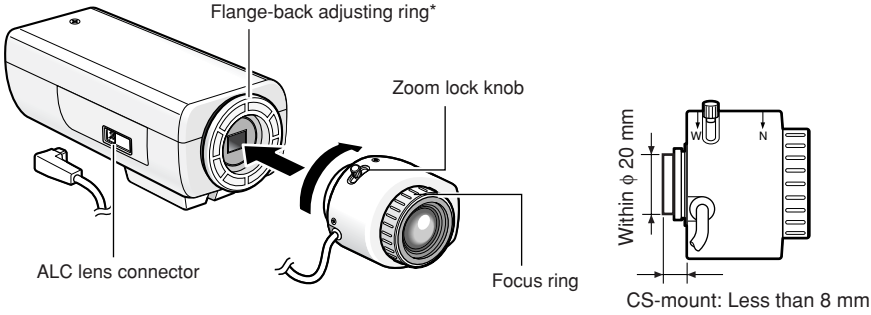
⑨ **SD memory error indicator (red)**

⑩ **AC 24 V/DC 12 V**
Power cable terminals

- About the [INITIAL SET] button
  Turn on the power of the camera while holding down this button, and wait around 5 seconds without releasing this button.
  Wait around 30 seconds after releasing the button. The settings including the network settings will be initialized.

Lens Mounting

Mount the lens by rotating it clockwise slowly. Then, connect the lens cable to the ALC lens connector of the camera.



Optional lens

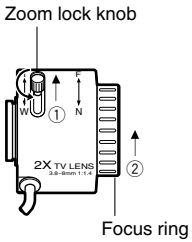
Lens type		Model number
ALC lens for 1/3 inch CCD cameras	Super wide (Fixed)	WV-LA2R8C3B
	Wide (Fixed)	WV-LA4R5C3B
	Standard (Fixed)	WV-LA9C3B
	2x vari-focal	WV-LZA61/2S
	8x vari-focal	WV-LZ62/8S

Focus adjustment

When shooting an object using an ALC lens, the first adjusted focus may be out-of-focus depending on the focal depth of the lens in use. In this case, focus on a darker object with the aperture open to prevent out-of-focus.

How to use a vari-focal lens

The following are descriptions of how to use a 2x vari-focal lens. Method of adjustment may be different depending on the lens in use. For further information, refer to the operating instructions of the lens in use.



① Loosen the zoom lock knob and slide it to the "T" end.

② Rotate the focus ring to one step short of the "F" end.

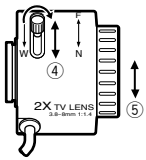
③ Shoot an object which is located 10 m away or more, and adjust the flange-back length of the camera.

Important:

Make sure that it is possible to focus on an object which is located around 1.2 m away by rotating the focus ring when the zoom lock knob is at the "W" end.

④ Slide the zoom lock knob to an appropriate position and tighten it.

⑤ Rotate the focus ring to bring the camera into focus.



Important:

When changing the angular field of view, adjust focus by changing the zoom lock ring position and rotating the focus ring again.

How to use a fixed-focal lens

When using a fixed-focal lens featuring the focus adjustment, adjust the flange-back length after setting the lens focus to the FAR end.

When adjusting the flange-back length, loosen the focus fixing screw (LOCK) using a screwdriver first. Tighten the flange-back fixing screw after the adjustment.
Recommended tightening torque: 0.05 N·m (0.5 kg·cm)

Important:

Do not over tighten the screw. It may strip the thread or cause out-of-focus.

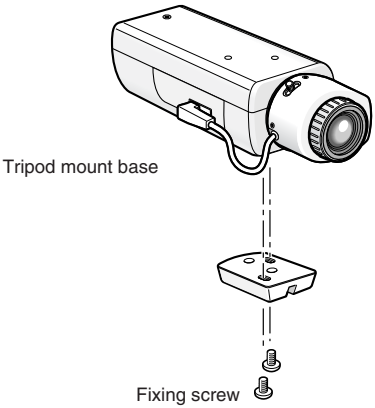
Installations/Connections

Before start the installation/connection, prepare the required devices and cables.
Before starting the connection, turn the power of the devices including the camera and the PC off or disconnect the AC adapters from the outlet.

Step 1

Fix an optional camera mount base onto the desired place and mount the camera on it.
When attaching an optional camera mount base on the bottom of the camera, use the removed screws to attach the camera mount base.
Otherwise, it may cause a drop or malfunction.

<Example>

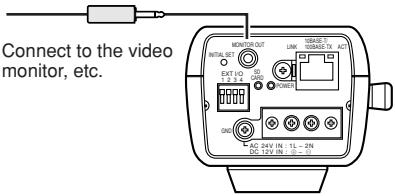


Important:

Method of installation may be different depending on the material of the place where the camera is to be installed.

Step 2

Connect the monaural mini plug (ø3.5 mm) to the monitor out connector (for adjustment) on the rear of the camera. (Only when adjusting the angular field of view)



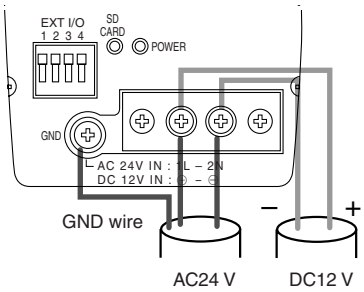
Important:

The monitor out connector is provided only for checking the adjustment the angular field of view on the video monitor when installing the camera or when servicing.
It is not provided for recording/monitoring use.

Step 3

Connect the power cable.

- When using AC 24 V/DC 12 V power supply



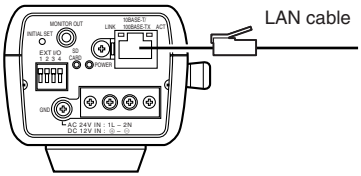
- When using PoE (Power over Ethernet: IEEE802.3af compliant)
  Connect a LAN cable (category 5 or better) between a PoE device (such as a PoE hub) and the network connector of the camera.

Important:

- Use all of 4 pairs (8 pins) of the LAN cable.
- The maximum cable length is 100 m.
- Make sure that the PoE device in use is compliant with IEEE802.3af standard.
- When connecting both the AC 24 V/DC 12 V power supply and the PoE device for power supply, PoE will be used for power supply.
- When disconnecting the LAN cable once, connect the cable again after 2 seconds or more from the disconnection. When the cable is connected before 2 seconds passed, the power may not be supplied from the PoE device.
- Refer to the provided slip (Recommended network devices for PoE (IEEE802.3af compliant) connection with the WV-NP244) for applicable PoE devices.

Step 4

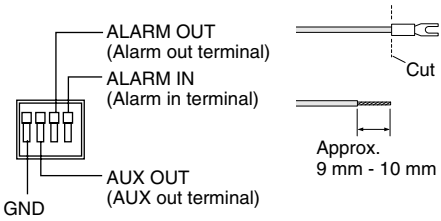
Connect a LAN cable (category 5 or better) to the network connector on the rear of the camera.



Step 5

Connect an external device to the EXT I/O connector.

When connecting an external device, remove 9 mm – 10 mm of the outer jacket of the cable and twist the cable core to prevent the short circuit first.



Specification of cable (wire):

AWG #22 - #28
Single core, twisted

Important:

- Do not connect 2 wires or more directly to a terminal. When it is necessary to connect 2 wires or more, use a splitter.

<Ratings>

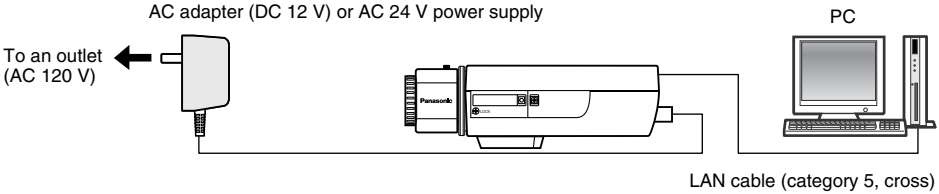
- ALARM IN
  OFF: Open
  ON: Make contact with GND (0.5 mA or more)
- ALARM OUT
  OPEN: Open Collector or DC 4 V – DC 5 V
  Maximum applied voltage: 20 V
  CLOSE: Make contact with GND (100 mA or less)
- AUX OUT
  OPEN: Open Collector or DC 4 V – DC 5 V
  Maximum applied voltage: 20 V
  CLOSE: Make contact with GND (100 mA or less)

Important:

Connect an external device with verifying that the ratings are within the specifications above.

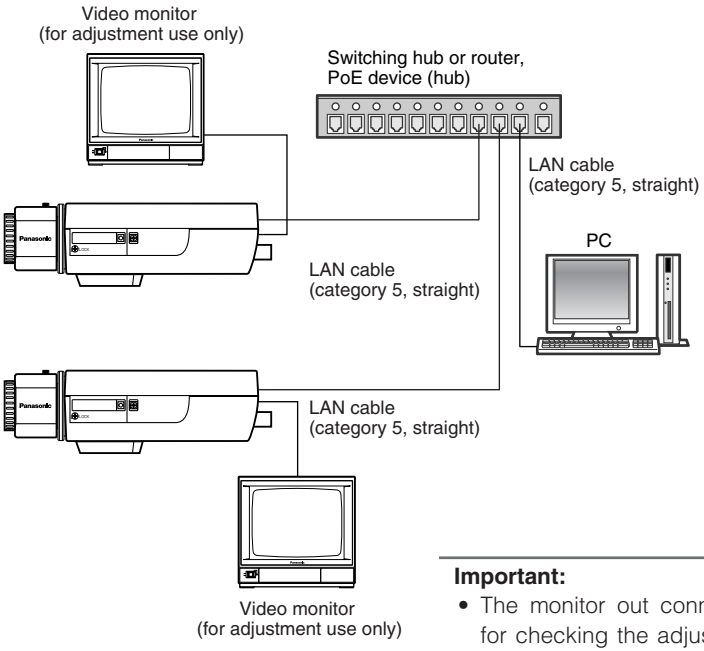
[Connection example]

When connecting with a PC directly



<Required cable>
LAN cable (category 5, cross)

When connecting to a network using a PoE device (hub)



<Required hardware>
Switching hub or router, PoE device (hub)

<Required cable>
LAN cable (category 5, straight)

Important:

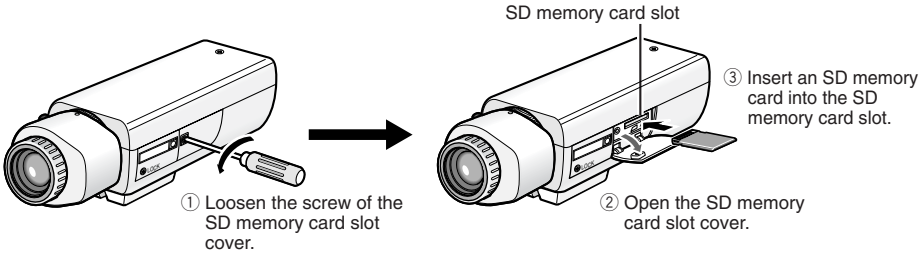
- The monitor out connector is provided only for checking the adjustment the angular field of view on the video monitor when installing the camera or when servicing. It is not provided for recording/monitoring use.
- Use a switching hub or a router which is compliant with 10BASE-T/100BASE-TX.
- Power supply is required for each network camera. When using a PoE device (hub), AC 24 V/DC 12 V power supply is unnecessary.

Insert/Remove an SD Memory Card

How to insert an SD memory card

Important:

- Before inserting an SD memory card, make sure that the power of the camera is turned off.
- Insert an SD memory card backside up.


SD memory card slot
③ Insert an SD memory card into the SD memory card slot.
① Loosen the screw of the SD memory card slot cover.
② Open the SD memory card slot cover.

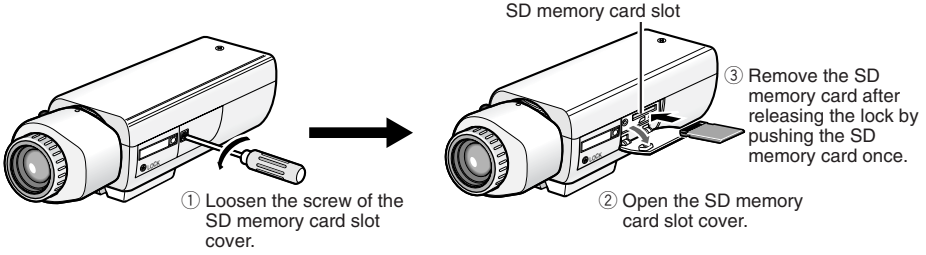
④ Close the SD memory card slot cover and fasten the screw.

⑤ Select "Use" for "About SD memory card" on the [SD memory card] tab of "Basic Setup" on the setup menu. (☞ Operating Instructions (PDF))

How to remove the SD memory card

Important:

Before removing the SD memory card, select "Not use" for "About SD memory card" on the [SD memory card] tab of "Basic Setup" on the setup menu first. (☞ Operating Instructions (PDF))


SD memory card slot
③ Remove the SD memory card after releasing the lock by pushing the SD memory card once.
① Loosen the screw of the SD memory card slot cover.
② Open the SD memory card slot cover.

④ Close the SD memory card slot cover and fasten the screw.

Performing the Network Settings

Install the software

Before installing the software, read the readme file on the provided CD-ROM first.

Software included on the provided CD-ROM

- Panasonic IP Setting software
  Configure the network settings of the camera using this software. Refer to the following for further information.
- Viewer Software "Network Camera View2"
  It is necessary to install the viewer software "Network Camera Viewer2" to display images on a PC. Install the viewer software by double-clicking the "Setup.exe" icon on the provided CD-ROM.

Configure the network settings of the camera using the Panasonic IP Setting software

It is possible to perform the network settings of the camera using the IP Setting software on the provided CD-ROM.
When the Panasonic IP Setting software does not work to perform the network settings of the camera, perform the network settings of the camera and the PC individually on the "Network setup" page of the setup menu. Refer to the operating instructions (PDF) for further information.

Important:

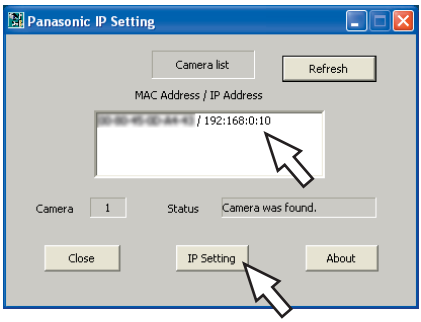
- When using Windows XP SP2, the "Windows Security Alert" window may be displayed when start the IP Setting software.
  In this case, click the "Unblock" button on the displayed "Windows Security Alert" window.
- For the security enhancement, the Panasonic IP Setting software will become inoperable when around 20 minutes have passed after turning on the power of the camera.

Step 1

Start the Panasonic IP Setting software.

Step 2

Click the [IP Setting] button after selecting the MAC address/IP address of the camera to be configured.

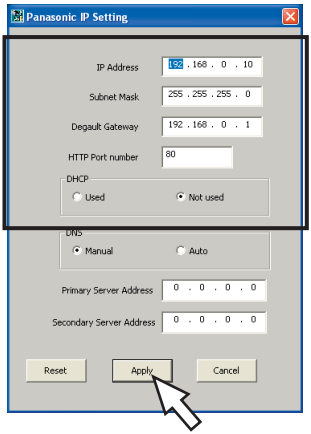


Note:

- When using a DHCP server, the IP address assigned to the camera can be displayed by clicking the [Refresh] button of the IP Setting software.

Step 3

Complete each network setup item and click the [Apply] button.



Important:

- It may take for around 30 seconds to complete to upload the settings to the camera after clicking the [Apply] button. The settings may be invalidated when the AC adapter or the LAN cable is disconnected before completing the upload. In this case, perform the settings again.
- When using a firewall (including software), allow access to all UDP ports.

Troubleshooting

Before asking for repairs, check the symptoms with the following table.
Contact your dealer if a problem cannot be solved even after checking and trying the solution or if the problem is not described below.

Symptom	Cause/solution	Reference pages
The power cannot be turned on.	**When using AC/DC power supply** • Is AC 24 V or DC 12 V power supply connect to the power supply terminal? → Confirm the cable is firmly connected. **When using a PoE device for power supply** • Are the PoE device and the network connector on the rear of the camera connected using a LAN cable (4-pair)? → Confirm the cable is firmly connected. • Depending on the PoE device, the power supply will stop when the demanded power exceeds its total power limit for all PoE ports. Refer to the operating instructions of the PoE device in use.	14

Specifications

Other specifications

Power source	AC 24 V or DC 12 V, PoE (DC 48 V)
Power consumption	AC 24 V 60 Hz 4.8 W, DC12 V: 400 mA
PoE:	4.2 W (Class 2 device)
Ambient temperature	–10 °C - +50 °C
Ambient humidity	90 % or less
Monitor output (for adjustment)	VBS: 1.0 V [P-P]/75 Ω, composite, ø3.5 mm mini jack (monaural)
External I/O terminals	ALARM IN x1, ALARM OUT x1, AUX OUT x1
Audio	Captured by the built-in microphone
Dimensions	72 mm (W) x 65 mm (H) x 158 mm (D) (excluding connectors/terminals)
Weight	Approx. 470 g

Camera

Image sensor	1/3 inch interline transfer CCD
Effective pixels	659 (H) x 494 (V)
Scanning area	4.8 mm (H) x 3.6 mm (V)
Scanning system	Progressive
Resolution	VGA: 640 x 480, QVGA: 320 x 240
Minimum illumination	1.5 lx (F1.4)
AGC	Always ON (fixed)
Electronic shutter	AUTO
Sensitivity up	OFF, x2AUTO, x4AUTO, x8AUTO, x16AUTO
White balance	AUTO/HOLD
Electronic Zoom	x1, x1.5, x2, x2.5, x3
VMD alarm	ON/OFF, 4 areas available
Aperture control	ALC/ELC (BLC ON/OFF)
ALC lens drive	DC drive
Lens mount	CS-mount

Network

Network	10BASE-T/100BASE-TX, RJ45 connector
Resolution	VGA (640 x 480)/QVGA (320 x 240)
Image compression method	MPEG-4 Image quality: LOW/NORMAL/FINE Transmission type: UNICAST/MULTICAST JPEG Image quality: 0 SUPER FINE/1 FINE/2/3/4/5 NORMAL/6/7/8/9 LOW (10 steps: 0-9) Transmission type: PULL/PUSH
Refresh interval (MPEG-4)	0.1 fps – 30 fps (Frame rate of JPEG display will be limited when displaying JPEG and MPEG-4 simultaneously.)

Audio compression method	G.726 (ADPCM) 32 kbps/16 kbps
Bandwidth Control	64 kbps/128 kbps/256 kbps/512 kbps/1 024 kbps/2 048 kbps/ 4 096 kbps/Unlimited
Protocol	TCP/IP, UDP/IP, HTTP, RTP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP
OS	Microsoft® Windows® 2000 Professional SP4, Microsoft® Windows® XP Home Edition SP2, Microsoft® Windows® XP Professional SP2
Web browser	Internet Explorer 6.0 Service Pack2
Maximum concurrent access number	8

Main functions

FTP client	Alarm image transmission, FTP periodic transmission
Multi-screen	Images from 8 cameras (4 cameras x 2 groups) can be displayed simultaneously.
SD memory card	Manufactured by Panasonic Capacity: 64 MB, 128 MB, 256 MB, 512 MB, 1 GB

Standard Accessories

CD-ROM* ..... 1 pc.
Operating Instructions (this book) ..... 1 pc.
Code Label ..... 1 pc.
Warranty ..... 1 pc.

* Panasonic IP Setting software, the viewer software and the operating instructions (PDF) are included on the CD-ROM.

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